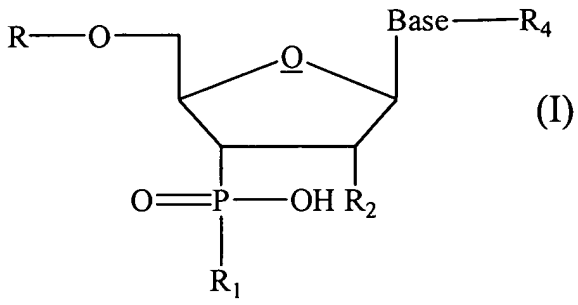
In the claims:

Please amend the claims as shown below by deleting the material indicated by strike-through and adding the underlined material. This listing of claims will replace all prior versions and listings of claims in this application.

1 (currently amended). An antibody that specifically binds to a synthetic oligonucleotide having an organic protecting group covalently bound thereto, which antibody does not bind to said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto;

wherein said oligonucleotide contains a protected nucleotide according to Formula (I):



(I)

wherein:

(i) said protected nucleotide of Formula I is a 3' nucleotide; R is a covalent bond to an adjacent nucleotide; R_1 is a protecting group; R_2 is H or –OH; and Base is a purine or pyrimidine base; or

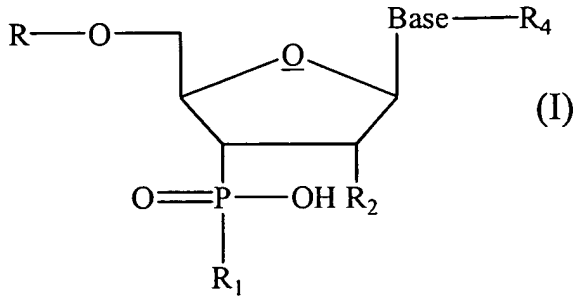
(ii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is $-OR_3$; R_3 a protecting group; and Base is a purine or pyrimidine base; or

(iii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is H or –OH; Base is a purine or pyrimidine base; and R_4 is a protecting group bonded to an amino group of said base.

2 (cancelled).

3 (cancelled).

4 (currently amended). ~~An~~ The antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides and has a 3' nucleotide, and wherein said 3' nucleotide is a protected nucleotide according to Formula (I):



(I)

wherein:

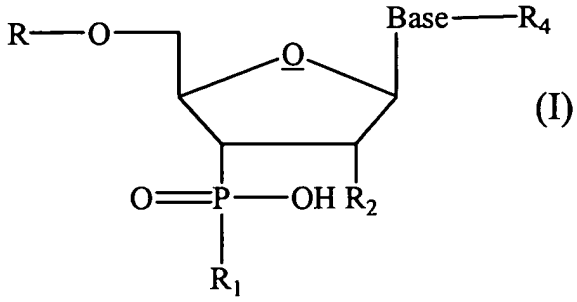
R is a covalent bond to an adjacent nucleotide;

R_1 is a protecting group;

R_2 is H or –OH; and

Base is a purine or pyrimidine base.

5 (currently amended). ~~The~~ An antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

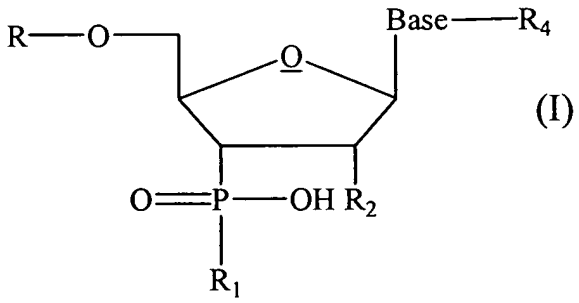
R_1 is a covalent bond to an adjacent nucleotide;

R_2 is $-OR_3$;

R_3 a protecting group; and

Base is a purine or pyrimidine base.

6 (currently amended). The ~~An~~ antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

R_1 is a covalent bond to an adjacent nucleotide;

R_2 is H or –OH;

Base is a purine or pyrimidine base; and

R_4 is a protecting group bonded to an amino group of said base.

7 (currently amended). The ~~An~~ antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected with a photolabile protecting group.

8 (currently amended). The ~~An~~ antibody according to claim 1, which antibody is a polyclonal antibody.

9 (currently amended). The ~~An~~ antibody according to claim 1, which antibody is a monoclonal antibody.

10 (currently amended). The ~~An~~ antibody according to claim 1 immobilized on a solid support.

11 (currently amended). A cell that expresses an antibody according to claim 9.

12 (currently amended). The ~~A~~ cell according to claim 11, which cell is a hybridoma.

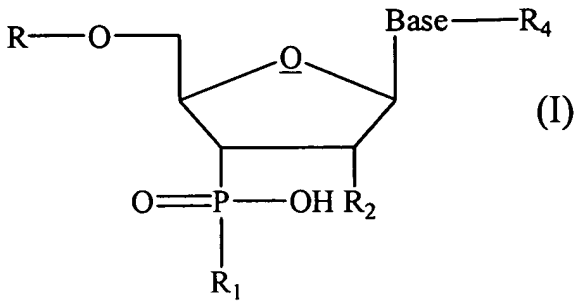
13 (currently amended). The ~~A~~ cell according to claim 11, which cell contains and expresses a heterologous nucleic acid encoding said antibody.

14. (currently amended) A method for detecting incomplete deprotection of a synthetic oligonucleotide by immunoassay, said immunoassay comprising the steps of:

contacting a synthetic oligonucleotide to an antibody, wherein said synthetic oligonucleotide is produced by the process of protecting and then deprotecting a precursor molecule thereof, and wherein said antibody specifically binds to a synthetic oligonucleotide having an organic protecting group covalently bound thereto, which antibody does not bind to said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto; and then

detecting the presence or absence of binding of said antibody to said synthetic oligonucleotide, the presence of binding indicating incomplete deprotection of said synthetic oligonucleotide;

wherein said oligonucleotide contains a protected nucleotide according to Formula (I):



(I)

wherein:

(i) said protected nucleotide of Formula I is a 3' nucleotide; R is a covalent bond to an adjacent nucleotide; R_1 is a protecting group; R_2 is H or –OH; and Base is a purine or pyrimidine base; or

(ii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is $-OR_3$; R_3 a protecting group; and Base is a purine or pyrimidine base; or

(iii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is H or –OH; Base is a purine or pyrimidine base; and R_4 is a protecting group bonded to an amino group of said base.

15. (previously presented) The method according to claim 14, wherein said immunoassay is a heterogeneous immunoassay.

16. (previously presented) The method according to claim 14, wherein said immunoassay is a homogeneous immunoassay.

17. (previously presented) The method according to claim 14, wherein said immunoassay is a sandwich assay.

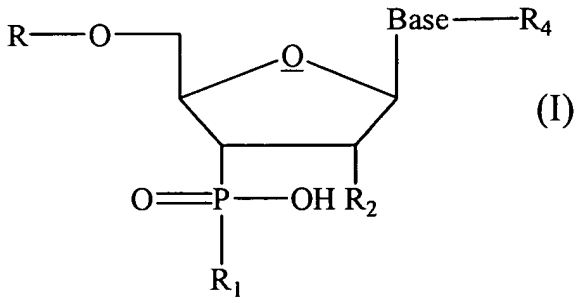
18. (previously presented) The method according to claim 14, wherein said oligonucleotide is immobilized on a solid support.

Claims 19-22 (cancelled).

Claims 23-55 (cancelled)

Claim 56-57 (cancelled).

58. (currently amended) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides and having a 3' nucleotide, and wherein said 3' nucleotide is a protected nucleotide according to Formula (I):



(I)

wherein:

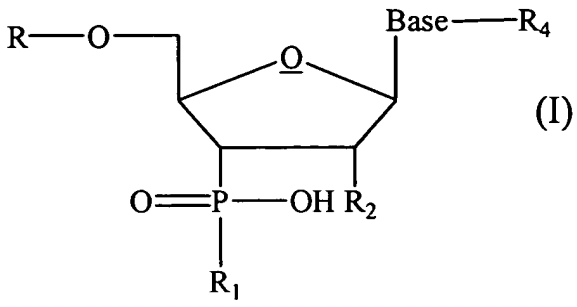
R is a covalent bond to an adjacent nucleotide;

R_1 is a protecting group;

R_2 is H or –OH; and

Base is a purine or pyrimidine base.

59. (currently amended) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

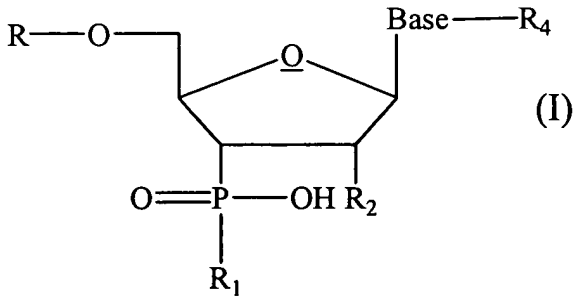
R_1 is a covalent bond to an adjacent nucleotide;

R_2 is $-OR_3$;

R_3 a protecting group; and

Base is a purine or pyrimidine base.

60. (currently amended) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

R_1 is a covalent bond to an adjacent nucleotide;

R_2 is H or –OH;

Base is a purine or pyrimidine base; and

R_4 is a protecting group bonded to an amino group of said base.

61. (previously presented) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected with photolabile protecting group.

62. (previously presented) The method according to claim 14, wherein said antibody is a polyclonal antibody.

63. (previously presented) The method according to claim 14, wherein said antibody is a monoclonal antibody.